

Applying Creative Teaching Techniques to Basic Design Course

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Abstract

“Basic Design” is a course to help develop creative thinking. Its purpose is to train interior design students to develop independent thinking as well as creative design ability. Creative abilities can be cultivated by education and through guiding process. Creative teaching can provoke students to bring in new ideas and new works. Based on the action research method, the researcher applied several creative teaching techniques in this study. The freshman’s “Basic Design” course was first inspected to identify problems. After actual teaching, creative teaching achievement was examined, and then the teaching program was adjusted accordingly. The process was repeated several times. The goal is to improve teaching quality of the design course and to elevate students’ learning achievements. Through out the research, along with the design theme “Glass Bottles Observation and Expression”, several creative teaching techniques, such as morphological analysis, attribute listing, brainstorming, and imagination, were applied. Teaching theory and teaching practice are fully combined in the whole process. Based on student attendance and interaction recorded, as well as experts’ evaluations on student’s projects, it demonstrates that applying creative teaching techniques in the design course does effectively help raise students learning interest and motivation. The scores of student’s works are above average as well.

Keywords: creative teaching, action research, Basic Design

Preface

' The basic design ' is the foundation of designing education, the goal is carrying out a kind of expression method relying mainly on intention activity, content include a lot of project, such as shaping , aesthetics , color , three-dimensional to commit, students that the

training of course helps cultivation to be designed from the skilled expression skill, and set up correct aesthetics idea, the more important thing is that trains the ability that students think independently and create, settle sturdy foundation for creating in design in the future .

As knowledge economy in the 21st century is changed fast, the content and way of education must change with the changes of the times , ability and instruction of training students to solve the problem create the inspiration that think, become one of the basic ability to seek survival in the society today. So, in the field land of teaching, how the teacher incorporates the teaching method of the intention in teaching further, excite students' creativity, it is with the focal points in the future at present.

Teaching is to encourage the teacher to suit measures to differing conditions in terms of time , change the teaching way, teaching that intention teaching is different from rigid tradition type teaching , is one kind to regard ' student as the centre ', students are with the experience and knowledge, under the circumstances that the teacher's intention teaching is guided , via the systemic skill and creative thinking tool , train students to produce a lot of , different , unusual ideas, promote personal creativity. How the teacher uses the teaching method of the intention in teaching, guide student's development on the intention!, in order to design the important subject of education.

Method which the researcher studies with the action, apply intention teaching to and teach the general design lesson of the university, in order to probe into the intension of intention teaching, offer and use intention teaching it in the practice experience of design course, and improve students' study effect, regard period as the reference that will teach in the future .

This research is main the following one of purpose shows:

1. Probe into the meaning and intension of intention teaching.
2. Analysis the content of general design course and teaching present situation.
3. The general design lesson uses the classroom practice experience of the teaching method of the intention and comments the ancient bronze mirror.

Research Method

The speciality grows up in the way to take action and study the teacher that is a kind of unity of knowledge and practice, the research law of combining research work with teaching. In order to improve previous teaching experience, make the students of grade one have thinking of designing and achieve meaning to take an exam of ability , promoting it to the interest of designing study, the researcher incorporates the idea of intention teaching in course with the course project, and use the meaning of achieving to take an exam of the method , promote teaching quality and study the effect.

The course of taking action and studying, including the following four kinds of key

elements: Confirm the focus in field , materials collecting , analysis and annotating, and the action plan . This research is implemented the plan by way of intention teaching by the researcher, carry on collection and record of the materials to course , result of every action procedure , and the present situation of observing the classroom is summed up , in order to describe that studies the course and result enclosed in circulation, and then make analysis further and explain.

Intension of creative teaching

Creative teaching train student is it think teaching of ability to create, namely the teacher is through the course content and planned teaching activity, by exciting and encouraging a kind of teaching way that students create the behavior, the purpose is to make students break through the thought firmly with set up the cognitive structure of innovation , by creating thinking that the teaching tactics guide students and help the thinking spring to well up, in order to produce the meaningful idea. As for the teacher , encourage the teacher to suit measures to differing conditions in terms of time , change the teaching way, the teacher uses the teaching principle or tactics that inspiration creates under the enviroment of open support, excite students and create the motive displayed , the teaching by training students to create thinking and problem and solve ability.

Design the education present situation basically

The educational intension of the general design is roughly summed up:

1. Education of the intention: It is the most important goal in the structure educated in general design .
2. Education that is felt: The forming of the impression strength , oversight and aesthetic feeling ability sharp to the things.
3. Education of technology and skill and technique: Course of making etc., pass the use and cooperation of the tool such as displaying skill and technique , computer auxiliary design and model, a designer's clever thought behaves intactly in front of masses.

To the teaching method , carry out in accordance with each teacher's speciality background . Must be divided into five major stages and gone on in the method course of general design teaching, including: Basic idea train, shaping is it train , make skill , works not to deliver to think, the works comment on. Because the design course teaching material is unable to write out in a simple and clear way , the new knowledge studied among each design theme is all different to some extent, the teacher, after leading students some time, students must carry on the deep discussion to one's own design direction chosen , the teacher only offers guidance and suggestion to all kinds of design motions in the class, lead students to find the key to the important problem, and then light hands to design to the question. Study way relies mainly on the fact that students study oneself, the teacher helps

from other as much as possible.

Design course creative teaching intension and course practice basically

The researcher carries out with other seven professional teachers together for originally teacher of setting theme this time of design course, but take and divide into groups the operation that teaching way is designed this time to practise, designing the topic in order that ' the vial observes and behaves ', design the training objective and have three items: 1. Use the experience of the sense organ, describe it to the observation of the things , appear in way the characters or the picture; 2. It is analysed that the thinking course and skill changed are practised; 3. Modelling that development has rationality , has artistic aesthetic feeling . In order to reach the above three projects, the researcher divides design process into four stages, including: See and experience, think with observing, sense organ that analyses , annotates reproducing.

Before using the teaching method of the intention formally, let students carry on one and observe the activity basically first, the namely students time outside class, observe one's own vial had each (a person prepares one), observe time as one week, utilize five sense organ of human body within this week, experience various kinds of phenomenon observed, writing down on the paper, must record and narrate more than 30 impressions, the observation can appear in way of characters or drawing.

In the appearing of the first homework, student's observation content written down, confine to the appearance of the bottle or observation of the color more, and the content recorded and narrate is covered again more, 2 classmates among them are unable to finish the recording and narrate of 30 items. From item homework appear result all right view, last student who design field tentatively, have not had too much skill and idea that have observed , is still limited to that the vision is the observation state of the main fact, and has neglected the application of other sense organs, and observation of the slight minor details is relatively inkless. Because student's observation and record mixed and disorderly , the researcher, according to this phenomenon, in the first course of intention teaching, way to use ' the attitude analytic approach of the type ', how extensively and observe the things systematically to to guide students!, and analyse the observation that sorts out , design and operate the course as follows in teaching unit.

Method of creative teaching : morphological analysis

The attitude analytic approach of the type is to list all parameters of a question, try arranging them to make up, to find out the new method . The advantage of the attitude analytic approach of the type is to only need short time and finish a matrix, in order to be used for solving the problem. The way to carry out is to resolve the question into several sub problems (independent key element), and then find out the variable parameter from

every stature question , accord with all affirmation of sub problem and its variable parameter to excite most ideas.

To explanation of the attitude analytic approach, in order to cooperate with course content and training objective of general design on the basis of the above, the researcher adjusts the operating sequence of this intention method a little, in order to reach the understanding degree relatively suitable for students of grade one, this teaching unit content and course of operating are narrated as follows:

The purpose of this intention teaching method is to help students to observe, know one's own uniqueness had of bottle, with the method to list independent key element , to compare the difference between every vial , and conspicuous and specific characteristic.

Study the task:

Observe some similar things carefully, then build and construct a system for their classification .

Teaching purpose :

In a series of similar things , lead students to perceive that include the projects , such as form , structure , material , function , weight , occupation mode ,etc., through being mutual and related , find out the hidden order.

Operate the course:

1. Give students 30 minutes at first, let them observe each other and discuss each other's vial had alternately, through the researcher's guide, students begin to observe the things from different angles, and require them to write the breakthrough point observed , and describe the type that they observe attitude.



fig.1. classroom observation



fig.2. classroom observation

2. After observing and discussing, the researcher requires students according to first step of observation breakthrough points written, lead students to put forward the independent key element that can be observed , these independent key elements of the basis, find out the unique nature that 10 vials have separately , namely the variable parameter in the attitude analytic approach of the type, in order to help students to

experience through different sense organs , go to understand and find various kinds of nature and change of the vial , urge its one that strengthen to things to realize, and the place that find the specific things out of the common.

Discuss with students' observation, the researcher sums up it to put in order, following for the using type attitude analytic approach, the things observed each according to students, the vial type attitude (independent key element) put forward, and according to these independent key elements, list the variable parameter as follows (Form 1):

表 1 玻璃瓶型態分析表

Independent key element	Variable parameter				
	Appearance	Cylinder	Curve	Spiral	Triangle
Material and constructing	Cork	Plastics	Metal	Pull ring	Glass
Manner of packing	Stick to the paper	Printing	Etch	Inlay	Carving
Brand name	ABSOLUT	BEAUTY	Coca-Cola	MATILOL	Shiseido
Color	Transparent	Dark green	White	Coffee	Pink
Use	Wine	Beverage	Perfume	Skin care	Nutrition supply
Smell	Sweet	Fragrant	Chock the nose	Bitter	Bubble



fig.3. Arrange by the price (low - high)



fig.4. Arrange by validity (short - long)



fig.5. bottom of the bottle design



fig.6. size of the bottleneck, bottle lid design

Teaching achievement:

And after classroom practical operation in the application of achieving meaning and taking an exam of the teaching method through this stage, the researcher finds out about

students' study situation with the discussion after class with students. Find that students generally react well, they think it 'even more than to observe harvest of one week at home by oneself' (A is grown), in the classroom, the way in which the utilizing type attitude analyses, 'make head or tail like the thing that one's own while observing in the family' (B will be grown), can know very clearly from what breakthrough point is wanted to observe, and exchange through the discussion with classmate, finding the uniqueness of each vial more clearly, students found too 'it was equally a vial originally, there unexpectedly can be such a various change too' (C is grown). Method that attitude analysis of utilizing etc., not merely promote the interdynamic situation in the classroom, fully achieve the teaching purpose at this stage too, namely pass observation and experience of the sense organ, the record analyses the things observed, and obtain different observation view and result, contribute to the execution of teaching of the next stage.

After teaching and pondering over at first stage, the researcher directs against teaching direction and purpose, self-criticism and revision that are planned, and according to this achievement, develop teaching tactics and plan at second stage, is it use intention teaching method to in the hope of, think creation of student ability excite out.

Two creative teaching methods: Attribute listing

After what is first stage things observe and analysis ability, researchers will guide student's observation things to already having at the second stage, do further association and full play, namely after understanding the unique nature of this things, can direct against different attribute, change, or propose the improved method, make original things change new type attitude, or use the new possibility had. So for reach this teaching goal, selected for use intention, researcher of stage, this teaching method the attribute enumerating.

Attribute enumerating is to observe an article sharply first, try one's best to enumerate this all kinds of attribute of article or the characteristic, then the attribute which the research institute should improve. In other words, carry on the improved method of the plot to the specific attribute enumerated, can use the free association method in the course of conceiving, make the special intention can be produced easily.

Study the task:

Enumerate the nature and characteristic of the things, method to use free association, improve or get the new use out of original articles.

Teaching purpose :

1. Enumerate attribute that article can change, train student pinpoint the problems and how about get the question out of.
2. After proposing carrying on improved attribute, the method to use free association, on one hand train student's smooth strength (fluency) in creativity, on one hand train

students how to solve the problem.

Operate the course:

1. List the characteristic and nature of the things one by one first , the nature must be the improved attribute , get rid of some unsuitable attribute, only leave the attribute classification that can develop and imagine further , the attribute includes: Form , all kinds of , soft and hard , weight , material , , use function ,etc..

2. After writing down the attribute by way of characters, namely can begin to discuss improving or improved idea , or new function use. In order to improve the result that the intention is conceived, the researcher leads students to use and associate the operation which incorporates this stage, enable student to have more imagination and full play space, do the improvement that is associated to each attribute . At this stage, students need to associate their various kinds of of the vial , show by way of figure , and Garvin's word is explained.

Teaching achievement:

After some time plot, student from the beginning verdant, to draw and write more and more ground ideas to the attribute of the things separately, and get the ideal homework achievement. The following is the homework achievement that some student operates in the classroom (Fig. 7 , 8) :

The achievement is assessed and examined with course:

After operating and practicing, students can be with the attribute that has already enumerate out been, is it conceive and imagine to go on to vial smooth, and can smooth associated thing, describe it on the drawing, this not only strengthens and practices the ability that student's hands paint but also reached the training for smooth strength . But through such an exercise, as to creativity turning into general character (flexibility) can train in the lump all with originality (originality) of the factor. On the other hand, such operation, can achieve the goal of designing education , the that namely guide students and pinpoint the problems, through conceiving with imagination, propose solving the problem method further.

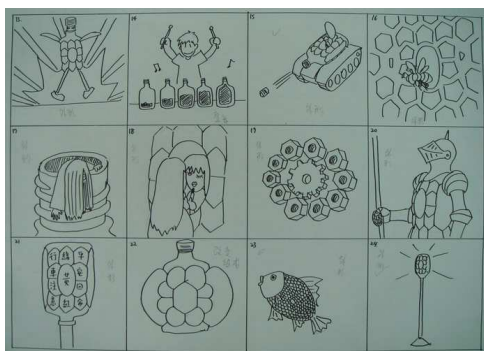


fig.7. Student's works of attribute listing

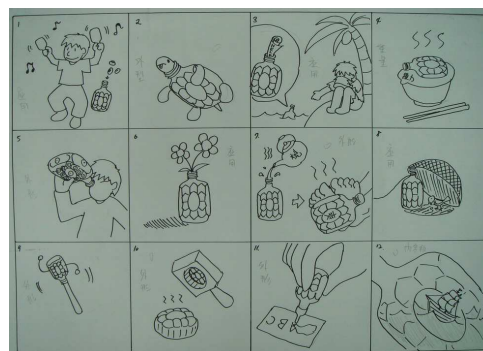


fig.8. Student's works of attribute listing

Pass researcher's observation in the classroom, and in students' interdynamic , find the independent thinking that student can more and more already, get the issue , and the method that the idea solve out of to thing. ' change various kinds of nature of the vial , let me produce all kinds of ideas of bottle correctly, it is very interesting ' (A is grown), ' to utilize the way to draw , narrate more conveniently than with the characters, and can relatively show one's own idea ' (B gives birth to), students study about the intention at this stage, the response is all good, think to one's own creation that ability is more and more confident, and understand the meaning designed progressively .

Researcher until this teaching stage implement, with with design Mr. of course basically for professor, discuss and plan to revise, the foundation taking doing as course training of the next stage.

Three creative teaching methods : brainstorming

After self-criticism at second stage, the researcher hopes to go still one step further to grow and use the ability to think , solve the problem in strong chemistry, in the intention teaching at the third stage , choose the mental work to agitate the tactics in order to be operated in the classroom, by way of offering the suggestion each other , promote teaching interdynamically and discuss.

It is that one kind brings out function that people produce the new idea that the mental work is agitated , its purpose is for solve some problems, it makes all participation personnel have an opportunity to issue the personal opinion to draw up a theme, in order to make the question receive the suitable answer. Its meaning operated refers to: In the meeting, members offer the personal suggestion to attempt to find out the method to solve problem in case of not restraining, inspiration , enlightens or the idea that it is one kind to come suddenly . The mental work is agitated and defined: A group of persons obtained a large number of idea methods within transient time. Using the mental work to agitate the method, the question range should be narrow and nature should be specific , and then contribute to the going on of teaching.

Study the task:

By way of making a speech in turn, to the theme - various kinds of uses of the bottle, put forward self- idea, in order to within shortest time , collect reach numerous mind.

Teaching purpose :

Ability of training students to conceive fast, learn to respect others' suggestion, improve oneself and others' idea at the same time .

Operate the course:

1. Before beginning to discuss, the researcher states the way to operate and discusses the theme first , and give students a little preparation and time to think.
2. Classmates enclose into one circle on the group, during certain time, by way of

making a speech in turn, express one's own idea directly, and the idea is exchanged through making a suggestion each other among classmates, producing a large number of suggestions , views, limited to the condition of the environment, the researcher writes down the idea that each student puts forward to operate this time, after being in large quantity , choose the best scheme from it.

Teaching achievement:

The following extraction students propose relatively having 5 ideas of intention:

1. Act as the weapon , musical instrument
2. Act as the tool used for crying for help
3. Tool (recoverable) as makes money
4. Act as the shoes
5. Act as the body-building apparatus

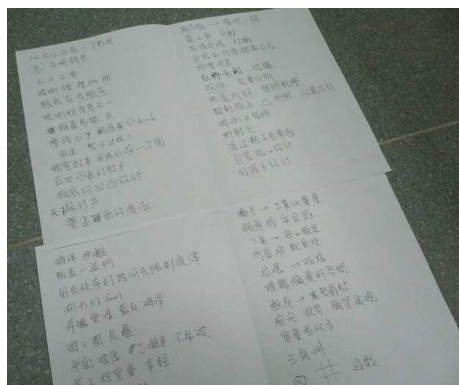


fig.9. The mental work agitates the record of making a speech

The achievement is assessed and examined with course:

The operation result at this stage, there are places covered with the result at second stage again, perhaps its' reason is too too close for the theme of discussing, or students have already had a specific idea to some topics , even so, operate in the classroom where the mental work agitates , still obtain good interdynamic, each student all has a chance to make a speech, enable them to think deeply , associate freely constantly, and pass the idea that other classmates offer , improve one's own idea ceaselessly, this will help students to design and pondering over application on, namely will conceive repeatedly , be improving and progressing repeatedly.

During the third stage, researchers have already guided students progressively , have broken the vial type attitude that has already had, changing a speciality among them, changing becomes another kind of type attitude, this design main operation lies in training students to change to already having a rule idea which observe the things, the speciality among them will come out conspicuously , will do it in order to annotate the basis which observes the thing ; Namely, break some old images of the vial and make a new explanation in observing things with a kind of new idea and technique of expression.

The above-mentioned three kinds of intention teaching methods, are all leading students to experience and analyse to observing things with different method and view, and then, except that analyse through pondering over the method , this design main task is here: Use element and composition method of modelling , to observed things , do first new annotation explanatory note and behavior. How to lead students to enter the stage of this transformation, is the direction in which the next teaching method needs to consider.

Four creative teaching methods: Imagine

In order to make students enter the stage of the things 'reproduce' smoothly, and does not receive too many restrictions, the researcher is after teaching is examined and analysed, choose to adopt the law of free association and imagine the law using each other, make students based on student's personal knowledge experience under an free and open condition, use and associate the skill, associate a thing with another thing, set up the novel and meaningful structure system among the things again, make use of and change the level concept into the three-dimensional modelling.

Study the task:

Present one and can fully express the concept (concept comes from and observes things), have modelling of artistic aesthetic feeling.

Teaching purpose:

Train students to observe and pick the view fetched by imagining the strength and creativity, in order to the three-dimensional modelling that is conceived, to annotate the concept, in order to reach the goal that the hand brain is used simultaneously.

Operate the course:

1. Students are from observe it in the speciality of the things, find breakthrough point that can give play to, lead how these direction cut it will be student, turn into a concept that can be operated, with the composition of the space model, fully express it and design the concept.

2. The teacher must offer the guidance on student's concept and on modelling aesthetics, and revise through the seminar, set up the idea of student's three-dimensional space progressively, contact the understanding of material feel, enable the space model to fully express the concept, can combine the vial observed by it of the response.

Teaching achievement:

From 10 students' works, select a case, explain how students put forward the concept, make the concept into the course of the space model.

Observe things: ABSOLUT transparent wine bottle

Design the concept: With the ice-cold and hard material, the irregular shape breaking is red, the blue changes purple color and arranges, and mix and put up the way to piece together, after to drink the spiritsing, broken and incomplete memory.

The achievement is assessed and examined with course:

Practise in a succession of intention teaching, students have been taught in many kinds of thinking way during the course, the annotation explanatory note to this design topic appears with the space model finally, in order to assess the achievement which uses intention teaching, researcher and other professional teachers always guide and examine teaching to student's work in the last week of course. In the course of commenting the ancient bronze mirror, find the training for intention teaching, can make students

relatively understand the concept expressed , comparatively know in thinking that clear , in the spoken language is expressed , can relatively also explain concept . On to appear works, can intact to express it design concept , in on material or type attitude grasp relatively, better too. It is not that every classmate can reach the good achievement to only manage, but most professional teachers still offer good appraisal and definite, and students also support and accept the course content of intention teaching.

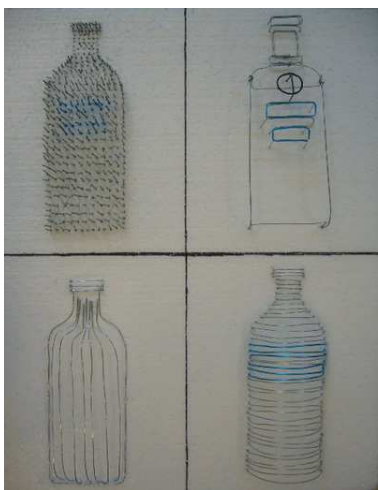


fig.10. display the wine bottle image with the iron wire



fig.11. Display the phenomenon of drinking with the iron wire of iron plate



fig.12. By piecing together and displaying the situation after drinking brokenly

Conclusion

This research carries on teaching with the teaching method of many kinds of intention, its purpose is to improve the teaching course and promote student's effect of studying . Move actual teaching , examine intention teaching and implement the course , and comment the works that ancient bronze mirror students appear and behave. The conclusion got in this research is as follows

1. Pass the use of the intention teaching method, and all kinds of observation directions, really contribute to cultivation of student's insight and inspiration of achieving meaning to do in the test.
2. Design of the teaching activity of the intention, helping students to participate in , teachers and students are interdynamic, promote the atmosphere of the classroom and teaching result.
3. Student's works and professional teacher comment the achievement of the ancient bronze mirror to show, the application of the intention teaching method, really contribute to promoting students and creating the ability of thinking.
4. The teacher uses the intention teaching method, can reflect student's specific study

state , help the teacher to adjust course progress and content .

5. The design of the teaching activity of the intention, improve the motive of student's initiative study and study effect.

In an era of knowledge economy, intention teaching is a education method that is worth implementing , suitable for department of designing etc. not merely , is it learn the door while being other to suitable for also, with the teaching activity of the intention, it is interdynamic to improve classroom teachers and students , strengthen student's learning motivation and effect , improve the national competitiveness further.